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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/537,976	12/27/2005	John Simon Kroll	MSQ02-004-US	1346

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EVAN LAW GROUP LLC
600 WEST JACKSON BLVD., SUITE 625
CHICAGO, IL 60661

EXAMINER

ARCHIE, NINA

ART UNIT	PAPER NUMBER
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1645

MAIL DATE	DELIVERY MODE
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06/14/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/537,976

Applicant(s)

KROLL ET AL.

Examiner

Nina A. Archie

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 41-60 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 41-60 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION
Election/Restrictions

Restriction is required under 35 U.S.C. 121 and 372.

The restriction on 3/22/2007 has been vacated.

This application contains the following inventions or groups of inventions, which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

1. Group I: claims 41-46, 48 drawn to an attenuated *Actinobacillus pleuropneumoniae* bacterium.
2. Group II: claims 47, 49, and 60 drawn to a method of treating an organism and a method of treating an animal.
3. Group III: claims 50-52 drawn to an isolated polypeptide, a vector, and a host cell.
4. Group IV: claims 53-54, 56 drawn to a virulent polypeptide encoding by the isolated polypeptide and a composition.
5. Group V: claim 55 drawn to a method of producing a virulence polypeptide.
6. Group VI: claim 57 drawn to an antibody.
7. Group VII: claim 58 drawn to a method for identifying an anti-bacterial agent.
8. Group VIII: claim 59 drawn to an anti-bacterial agent.

The inventions listed as Groups I-VIII do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

The technical feature of Group I is an attenuated *Actinobacillus pleuropneumoniae* bacterium. The technical feature of Group 1 is anticipated by Segers et al US Patent 6,783,764 August 31, 2004 (filing date August 31, 1999). Segers et al. teaches a

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attenuated *Actinobacillus pleuropneumoniae* bacterium (abstract column 4 lines 18-21, column 5 lines 22-35, column 6 lines 1-29).

2. Group II is a method of use of the technical feature of Group I, an attenuated *Actinobacillus pleuropneumoniae* bacterium.
3. The technical feature of Group III is an isolated polypeptide, a vector, and a host cell.
4. The technical feature of Group IV is a virulent polypeptide encoding by the isolated polypeptide and a composition.
5. Group V is a method of use of the technical feature of Group III, an isolated polynucleotide, a vector, and a host cell.
6. The technical feature of Group VI is an antibody.
7. Group VII is a method of use of the technical feature of Group VIII, an anti-bacterial agent.
8. The technical feature of Group VIII is an anti-bacterial agent.

Nucleotide Sequence Election Requirement to Groups I, II, and VII

In addition, Groups I, II, and VII, detailed above, read on patentably distinct sequences. Each sequence is patentably distinct because they are structurally different and a further restriction is applied to each Group.

Applicant must further elect:

For Groups I, choose the nucleotide sequence from SEQ ID NOs. 1-56 in the bacterium.

For Group II and VII choose the nucleotide sequence from SEQ ID NOs. 1-56.

Applicant is advised that examination will be restricted to only the elected nucleotide sequence and should not be construed as a species election.

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Polynucleotide Sequence Election Requirement to Groups III, IV, and V

In addition, Groups III, IV, and V, detailed above, read on patentably distinct sequences. Each sequence is patentably distinct because they are structurally different and a further restriction is applied to each Group.

For Groups III-V, choose

A) a polynucleotide encoding a gene product which is naturally involved in the virulence of *A. pleuropneumoniae*.

B) a polynucleotide encoding a gene product which is not naturally found in *A. pleuropneumoniae*, but whose expression therein is capable of modulating the virulence of that bacterium.

C) a polynucleotide which is not naturally found in *A. pleuropneumoniae* but which is capable of modulating the virulence of that bacterium by its direct interaction with *A. pleuropneumoniae* virulence genes or gene product.

D) a polynucleotide comprising a nucleotide sequence from SEQ ID NOs. 1-56

If D is elected, applicant is respectfully required to further elect a sequence from SEQ ID NOs. 1-56.

If the Applicant elects Group VI the applicant is required to elect an individual SEQ ID NO. of Group VI.

Applicant is advised that examination will be restricted to only the elected nucleotide sequence and should not be construed as a species election.

Antibody Election Requirement to Group VI

In addition, Group VI, detailed above, read on patentably distinct antibodies that recognize a specific sequence. Each antibody is patentably distinct because they have

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different biochemical and immunological properties and a further restriction is applied to each Group.

For Group VI, choose

1. Antibody that specifically recognizes the polynucleotide of claim 50 therefore choose a polynucleotide of SEQ ID NOs. 1-56.

Applicant should choose one polynucleotide from Group III.

2. Antibody that specifically recognizes the polypeptide encoded by the polynucleotide of claim 50 therefore choose a polynucleotide of SEQ ID NOs. 1-56.

Applicant should choose one polynucleotide from Group III.

3. Antibody that specifically recognizes an isolated *Actinobacillus pleuropneumoniae* polypeptide.

Applicant is advised that examination will be restricted to only the elected nucleotide sequence and should not be construed as a species election.

Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species or invention to be examined even though the requirement be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

The election of an invention or species may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse.

Should applicant traverse on the ground that the inventions or species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions or species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions

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unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C.103(a) of the other invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nina Archie whose telephone number is 571-272-9938. The examiner can normally be reached on M-F 8:30am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's acting supervisor, Jeffrey Siew can be reached on 571-272-0787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Nina Archie
Patent Examiner
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Remsen 3B31



MARK NAVARRO
PRIMARY EXAMINER